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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,068	07/10/2006	Kenji Nakamura	20699/0205038-US0	5521

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EXAMINER	
FREEMAN, JOHN D	
ART UNIT	PAPER NUMBER
1794	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/597,068	NAKAMURA ET AL.	
	Examiner	Art Unit	
	John Freeman	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 August 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 6-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 6-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-10, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita et al. (JP 05-000492) in view of Miyashita et al. (JP 2002-187246).

3. Miyashita et al. (hereafter Miyashita '492) disclose a polyamide film [0001]. The films comprises at least layers (a), (b), and (c) [0010]. Miyashita '492 teaches five layered structures [0024]. Layer (a) comprises polymer (A), which is an aromatic polyamide [0010]. Layer (b) comprises polymer (B), which comprises an aliphatic polyamide [0010]. Layer (c) comprises a mixture of polymers (A) and (B) [0010]. The preferred mixing ratio of polymers (A) and (B) lies in the range of 7:3 to 1:9 [0018]. The range overlaps with Applicant's disclosed range. As set forth in MPEP 2144.05, in the case where the claimed range "overlap or lie inside ranges disclosed by the prior art", a *prima facie* case of obviousness exists, In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

4. Miyashita '492 is silent with regard to a flex resistance modifying agent.

5. The use of such modifiers in polyamide-based film was well-known in the art at the time of the invention, as evidenced by Miyashita '246, which discloses a polyamide elastomer (D) added to various polyamide layers to improve the flex resistance of the overall film, in a range of 0-10% by weight [0011].

6. At the time of the invention, it would have been obvious to one of ordinary skill in the art to add the polyamide elastomer to the film, in any and/or all layers, to improve the flex resistance of the overall film.

7. Given that the polymeric structure described by Miyashita '492 in view of Miyashita '246 is the same as the multilayer film disclosed by Applicant, the examiner takes the position that the film of the combination of '492 and '246 intrinsically would have a flex resistance values of 5 or less pinholes per 497 cm^2. The examiner notes that examples given in Table 1 disclose multilayer structures having flex

resistance values greater than 5 pinholes per 497 cm2. Those examples, however, do not use a weight ratio of A:B of 1:9. Therefore, those values cannot be used against the current rejection.

8. Regarding claims 2-3:

9. Examples 9 and 10 of Miyashita '492 provide a teaching of a multilayer film having the structure a/c/b and b/c/a/c/b respectively.

10. Regarding claim 4:

11. Miyashita '492 and Miyashita '246 are silent with regard to multiple (c) layers that have different compositions from each other.

12. At the time of the invention, it would have been obvious to one of ordinary skill in the art to vary the compositions through routine optimization, for example, to improve adhesion of layers.

13. Regarding claims 7-8:

14. The film is biaxially stretched 2.5-5 times in each direction in Miyashita '492 [0027].

15. Regarding claims 9-10:

16. Given that Miyashita '492 is silent with regard to the aliphatic content of the aromatic polyamide (A) and the aromatic content of the aliphatic polyamide (B), the examiner considers Miyashita '492 to disclose an aliphatic content and aromatic content of 0% in each respective case.

17. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita et al. (JP 05-000492) in view of Miyashita et al. (JP 2002-187246) as applied to claims 1-10, and 15 above, and further in view of Miyashita et al. (JP 08-156205).

18. Miyashita '492 in view of Miyashita '246 disclose a polyamide film as described previously. Miyashita '492 discloses the aliphatic polyamide can be nylon 6 or nylon 66 [0017].

19. Both are silent with regard to a hindered phenolic antioxidant.

20. The use of such antioxidants was well-known in the art at the time of the invention, as evidenced by Miyashita '205, which discloses a film [0001]. The film contains a layer (c) comprising a mixture of aromatic and aliphatic polyamides, and having a hindered phenolic antioxidant content of 0.006-0.5%

[0010]. The hindered phenols include those listed by Applicant, such as 3,5-di-t-butyl-4-hydroxybenzylphosphonate-diethyl ester [0022].

21. At the time of the invention, it would have been obvious to one of ordinary skill in the art to add the phenolic antioxidant to the layer containing a mixture of polyamide types to improve its resistance to oxidation.

22. Further, Miyashita '492 and Miyashita '205 are silent with regard to a polyamide film comprising 10-80% of the thickness of the overall film.

23. Given the very broad range claimed by Applicant, at the time of the invention, it would have been obvious to one of ordinary skill in the art to arrive at a thickness within said range. For example, one of ordinary skill would appreciate that a layer comprising 60%+ of the film would impart more structural properties to the film than other layers, and adjust the thicknesses of the layers accordingly.

24. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita et al. (JP 05-000492) in view of Miyashita et al. (JP 2002-187246) as applied to claims 1-10, and 15 above, and further in view of Miyashita et al. Tanaka et al. (JP 2002-172742).

25. Miyashita '492 and Miyashita '246 are silent with regard to a layer comprising ethylene-vinyl alcohol (i.e. saponified ethylene-vinyl acetate).

26. The use of such layers in polyamide-based film was well-known in the art at the time of the invention, as evidenced by Tanaka. Tanaka discloses a film comprising layers X, Y, and Z. Layer X comprises ethylene-vinyl alcohol (EVOH) [0005-0006, Abstract]. Layer Y comprises an aliphatic polyamide. Layer Z comprises a mixture of aliphatic and aromatic polyamides.

27. Given the clear similarities between Tanaka and Miyashita, at the time of the invention, it would have been obvious to one of ordinary skill in the art to add an EVOH layer to improve the barrier properties of the film.

Response to Arguments

28. Applicant's arguments filed 6 August 2008 have been fully considered but they are not persuasive.

29. Applicant argues neither "JP '492 nor JP '246 teaches or suggest that a combination of a resistant modifying agent and a layer containing an aromatic polyamide and an aliphatic polyamide [in the claimed ratios] yields the claimed flex resistance values" (p6). It is agreed that neither JP '492 nor JP '246 separately disclose the combination of a resistant modifying agent and a layer containing an aromatic polyamide and an aliphatic polyamide as claimed. However, this is why JP '492 is used in combination with JP '246. As noted above the examiner maintains, at the time of the invention, it would have been obvious to one of ordinary skill in the art to add the polyamide elastomer to the film, in any and/or all layers, to improve the flex resistance of the overall film. It is the examiner's position that it is the combination of references that discloses the claimed flex resistance values. The examiner notes the references do not need to suggest the claimed flex resistance values would result from their combination for their combination to be proper.

30. Applicant submits Comparative Example 3 corresponds to films disclosed by JP '492 and JP '246. Applicant further notes the flex/pinhole resistance does not satisfy the present claims. Applicant compares Comparative Example 3 with inventive Example 5. However, there is not a proper side-by-side comparison between Example 5 and Comparative Example 3 because the respective layers of the examples do not have the same thicknesses, and it is unclear what, if any, effect this would have on the properties of the film. As set forth in MPEP 716.02(d), whether unexpected results are the result of unexpectedly improved results or a property not taught by the prior art, "objective evidence of nonobviousness must be commensurate in scope with the claims which the evidence is offered to support". In other words, the showing of unexpected results must be reviewed to see if the results occurred over the entire claimed range, In re Clemens, 622 F.2d 1029, 1036, 206 USPQ 289, 296 (CCPA 1980). Applicants have not provided data to show that the unexpected results do in fact occur over the entire claimed range of 5:95 to 20:80. Furthermore, Miyashita '492 discloses a ratio of 1:9, which directly falls within the presently claimed range.

Conclusion

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pophusen '087 discloses multilayer films comprising multiple polyamide layers.

32. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Freeman whose telephone number is (571)270-3469. The examiner can normally be reached on Monday-Friday 7:30-5:00PM EST (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571)272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner
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